

**Notice of Allowability**

Application No.

10/795,943

Applicant(s)

MATSUMOTO, ATSUSHI

Examiner

Kanji Patel

Art Unit

2624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/8/04.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>3/8/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                 | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

**In the claims:**

**Claim 9, line 1, after "program" insert -- stored on a computer readable medium --.**

### **DETAILED ACTION**

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

3. Information Disclosure Statement submitted on 3/8/04 has been considered by the examiner.

#### ***Drawings***

4. Drawings filed 3/8/04 have been approved by the examiner.

#### ***Allowable Subject Matter***

5. The following is an examiner's statement of reasons for allowance:

**Claims 1-9 are allowed.**

The present invention is directed to data interpolation for an image reading apparatus. Each independent claim identifies the uniquely distinct features of “ a degree-of-correlation detecting portion for detecting the degree of correlation of a plurality of pixel data situated in the vicinity of the defective pixel, a filter-size selecting portion for selecting a filter size according to a result of detection provided by said degree-of-correlation detecting portion and an interpolation-data computing portion for computing the interpolation data by performing a filtering operation on a plurality of pixel data situated in the vicinity of the defective pixel according to the filter size selected by said filter-size selecting portion”. The closest prior art to Weldy et al. (US 6,188,804 B1), Gindele et al. (US 6,934,056 B2) and Nakamura (US 6,628,848 B1) disclose a reconstructing missing pixel information to provide a full output image, a noise cleaning and interpolating sparsely populated color digital image using a variable noise cleaning kernel and an image reading apparatus, respectively, but either singularly or in combination, fail to anticipate or render the above limitations obvious.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

**Other prior art cited**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shezaf et al. (US 6,832,009 B1) disclose a method and apparatus for improved image interpolation.

Gindele et al. (US 6,625,325 B2) disclose a noise cleaning and interpolating sparsely populated color digital image using a variable noise-cleaning kernel.

Fukushima et al. (US 5,570,436) disclose a method for interpolating and an apparatus employing the method.

Wohlstadter et al. (US 6,977,722 B2) disclose an assay plates, reader systems and methods for luminance test measurements.

Yamashita et al. (US 5,513,281) disclose an interpolation method and apparatus by correlation detection using fuzzy inference.

**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kanji Patel whose telephone number is (571) 272-7454. The examiner can normally be reached on Monday to Thursday from 8 a.m. to 6:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bella, Matthew can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kanji Patel  
Art Unit 2624  
12/09/06

  
**KANJIBHAI PATEL**  
**PRIMARY EXAMINER**